

Green Tags and Green Power Purchasing

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Who We Are....

Welcome to Green-e a program of the Center for Resource Solutions



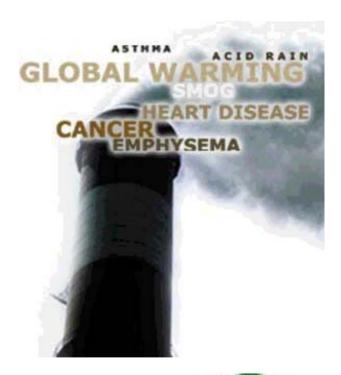
- CRS is a non profit organization (501(c)3) and independent third party that certifies green power products sold in competitive retail electricity markets, regulated markets, and nationwide through Tradable Renewable Certificates (TRCs).
- The Green-e program promotes product quality, consumer confidence and best practices in green power procurement.





Why Buy Green Power?

- Electricity generation is the largest industrial source of air pollution and green house gas emissions.
- Traditional power plants produce 37% of the carbon dioxide that we release into the atmosphere the largest single contributor to global warming and produces 64% of the sulfur dioxide that produces acid rain.
- The Union of Concerned Scientists (USC) estimates that the US could meet the proposed targets set by the Kyoto Protocol by switching to 20% renewable energy by 2020.







What is "Green" Power?

Eligible Renewable Energy Sources*

- Wind
- Solar
- Small or Certified Low Impact Hydro
- Landfill Gas
- Biomass
- Geothermal



^{*} General categories of eligible resources. Specific eligibility may vary according to Regional Green-e Standards.

Ways to Buy Green Power Green Power Options

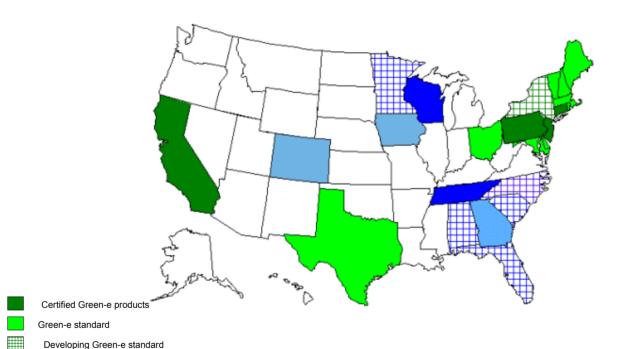
- Retail Electric Choice Competitive markets
- Utility Green Pricing Programs
 Regulated markets
- Renewable Certificates
 All markets
- Distributed Generation
 On site solutions





Ways to Buy Green Power

Green Power Options



*Tradable Renewable Certificates

Available in All Markets



Accredited Green Pricing products

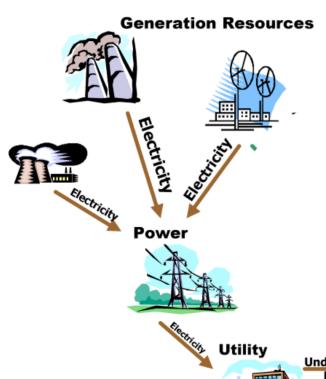
Green Pricing Accreditation standard

Developing Green Pricing Accreditation standard

green-e.org

Ways to Buy Green Power

Green Power Options



Retail Choice:

A supplier procures the power from a renewable energy facility in the region and the power enters into the regional electricity pool that supplies you with power.









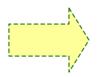
- Terminology: Green Tags, T-RECs
- A certificate represents the benefits of renewable energy delivered to the grid
- Bought/sold separate from generic power as a certificate
- Consumer pays only for the premium or "benefits" of renewable electricity



Renewable Generator:
Production of
Renewable Energy



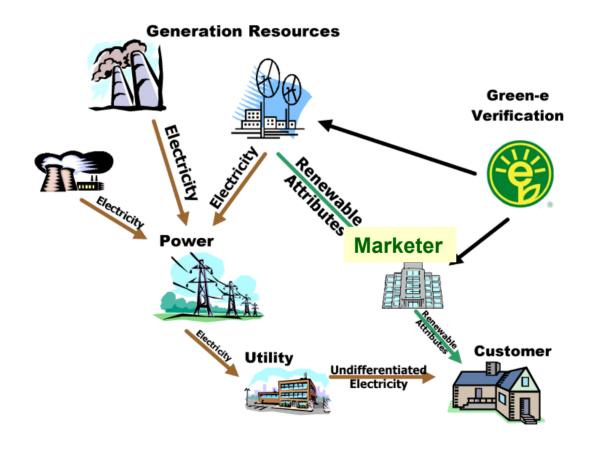
Environmental Benefits (SO₂, NO_x,CO₂)



Commodity Electricity











- By buying the environmental attributes of renewable energy, you help pay the price difference between renewable electricity and traditional electricity
- Consumers pay two suppliers instead of one for their green power, but price roughly the same



Benefits of Certificates



We are excited to be part of a clean energy future for both Pennsylvania and the nation"

Barry Hilts, Associate Vice President of Facilities, University of Pennsylvania

General Information

Classification: University

Location: Philadelphia, PA

5%

% of Electricity Supplied by

Wind Energy:

MW of Wind Purchased: 7.61

Number of Turbines: 5.07

Environmental Offsets (per year)

 Pounds of Coal Saved:
 6,673,288

 Pounds of CO2 Saved:
 23,981,000

 Pounds of SO2 Saved:
 180,200

Pounds of NOx Saved: 56,200
Pounds of Hg Saved: 0.7120

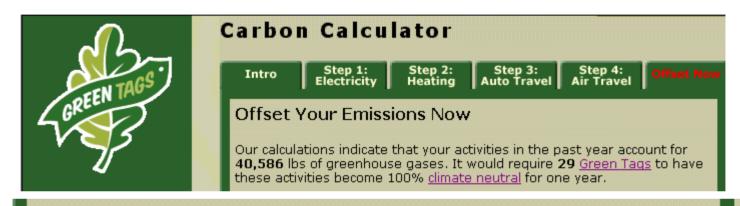
The wind energy purchase is equal to:

Planting 3,260 Acres of trees each year, OR

Taking 1,712 cars off the road!



Benefits of Certificates Carbon Calculators



Emission Source	Average	My Usage	My Emissions
Electricity	10,388 KWh	10,388 kWh	8,848 lbs
Heating	730 gal	730 gal	16,340 lbs
Automobile Travel	556 gal	556 gal	10,883 lbs
Air Travel	962 mi	3,320 mi	4,515 lbs
		Total:	40,586 lbs

Bonneville Environmental Foundation: www.greentagsusa.org

Community Energy: www.newwindenergy.com



Who is Selling TRCs?















GO TO WWW.GREEN-E.ORG FOR PRODUCT INFO

Green Power Purchasers State and Local GP Purchasers

- The Commonwealth of Pennsylvania
- Media, PA
- University of Pennsylvania
- The State of New Jersey
- Maryland State Government
- Montgomery County, MD*
- Arlington County, VA*
- Catholic University

- Salt Lake City, UT
- Tennessee State
- New York State
- Santa Monica, CA
- Portland, OR
- Mackinaw City, MI*
- Montgomery County, MD*
- Chicago, IL
- Oakland, CA







For more information....

- Green-e: Green Power standards, suppliers and available products www.green-e.org
- EPA Green Power Partnership: Technical assistance and national recognition www.epa.gov/greenpower
- NREL: Latest news, reports and listing of RFPs <u>www.eren.doe.gov/greenpower</u>

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